NATURAL RESOURCES CONSERVATION SERVICE

OPERATION AND MAINTENANCE

FOR

TERRACE
BROAD BASE
(feet)
CODE 600

The following University of Missouri Agricultural Guides provide information on the operation and maintenance of terrace systems and their outlets:

1501 "Operating and Maintaining Under-ground Outlet Terrace Systems"

1503 "Operating and Maintaining Grassed Outlet Terrace Systems"

1504 "Maintaining Grassed Waterways"

Other operation and maintenance items to address:

1. Maintain ridge height.

2. Raise any low spots in terrace ridge to reestablish the design ridge elevation.

3. Regrade channel flowline to maintain positive drainage to all outlets. Remove sediment accumulations to reestablish design channel elevations.

4. Repair any spots of erosion in ridge cross section.

Additional Details: _____

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NATURAL RESOURCES CONSERVATION SERVICE
OPERATION AND MAINTENANCE

FOR

TERRACE

STEEP BACKSLOPE
(feet)
CODE 600

The following University of Missouri Agricultural Guides provide information on the operation and maintenance of terrace systems and their outlets:

1501 "Operating and Maintaining Underground Outlet Terrace Systems"

1503 "Operating and Maintaining Grassed Outlet Terrace Systems"

1504 "Maintaining Grassed Waterways"

Other operation and maintenance items to address:

1. Maintain ridge height.

2. Raise any low spots in terrace ridge to reestablish the design ridge elevation.

3. Regrade channel flowline to maintain positive drainage to all outlets. Remove sediment accumulations to reestablish design channel elevations.

4. Repair any spots of erosion in ridge cross section.

5. Reseed any bare spots in backslope of terrace.

6. Fertilize, if applicable, to maintain vegetation.

Additional Details: _____

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NATURAL RESOURCES CONSERVATION SERVICE
OPERATION AND MAINTENANCE

FOR

TERRACE

NARROW BASE
(feet)
CODE 600

The following University of Missouri Agricultural Guides provide information on the operation and maintenance of terrace systems and their outlets:

1501 "Operating and Maintaining Underground Outlet Terrace Systems"

1503 "Operating and Maintaining Grassed Outlet Terrace Systems"

1504 "Maintaining Grassed Waterways"

Other operation and maintenance items to address:

1. Maintain ridge height.

2. Raise any low spots in terrace ridge to reestablish the design ridge elevation.

3. Regrade channel flowline to maintain positive drainage to all outlets. Remove sediment accumulations to reestablish design channel elevations.

4. Repair any spots of erosion in ridge cross section.

5. Reseed any bare spots in frontslope and backslope of terrace.

6. Fertilize, if applicable, to maintain vegetation.

Additional Details: _____

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NATURAL RESOURCES CONSERVATION SERVICE
MISSOURI CONSTRUCTION SPECIFICATION

FOR

TERRACE
BROAD BASE
(feet)
CODE 600

General

Construction operations shall be carried out in a manner and sequence that erosion and air and water pollution are minimized and held within legal limits.

The completed job shall present a workmanlike appearance and shall conform to the line, grades, and elevations shown on the drawings or as staked in the field.

All operations shall be carried out in a safe and skillful manner. Safety and health regulations shall be observed and appropriate safety measures used. Contractor shall be assured that all state laws concerning buried utilities have been met.

Site preparation

All dead furrows, ditches, or gullies shall be filled before constructing the terrace or shall be part of the construction. All old terraces and other obstructions shall be removed, as necessary, to install a farmable system.

Terrace construction

The terrace shall be constructed according to the planned alignment, grade, and cross section with the specified overfill for settlement and the channel to drain. Farmable ridge and cut slopes must be 5 (horizontal - H):1 (vertical - V) or flatter.

The minimum moisture content for obtaining the required compaction shall be such that when the material is kneaded in the hand, it will form a ball which does not readily separate. Fill material that is too dry shall have water added or work shall be stopped until moisture conditions are satisfactory.

Earthfill shall be placed in 9 inch layers. Each layer will be compacted by complete coverage by at least two passes with the hauling and spreading equipment or equivalent. Care must be taken to assure proper compaction and bond of the fill material to the existing fill. The side slopes of the existing fill shall be excavated until moist material is uncovered and a good bond can be attained.

Any ditch or depression at the bottom of the backslope shall be filled and smoothed so that drainage will be away from the terrace and not parallel to it. Terrace ridges constructed across gullies or depressions shall be compacted to insure proper functioning of the terrace.

Any channel blocks shall have a minimum top width of 6 feet and side slopes 5 (H):1 (V) or flatter unless shown otherwise on the drawings.

Cuts and fills should be made in such a manner that topography will be enhanced. Excavation for broad base terraces is generally made on the uphill side. Excessive cuts should not be made in depressions to secure borrow to build the terrace ridge. Borrow for large fills across depressions shall be taken from the intervening ridges, preferably immediately below the terrace ridge, which will tend to flatten the area to be farmed.

The surface of the finished terrace shall be reasonably smooth and present a workmanlike finish.

If required on the drawings, topsoil shall be salvaged from the footprint area of both the channel and terrace ridge, stockpiled and spread over excavations and other areas to facilitate restoration of productivity.

When underground conduits are used as an outlet to a terrace, they shall be constructed

according to Missouri Construction Specification for Underground Outlet (620) or as shown on drawings.

Provisions must be made to prevent piping if underground circuits are located under terrace ridges. Mechanical compaction, water packing, trench sidewall sloping, and installation and backfill of conduit trenches early enough to allow adequate settlement are methods that can be used. The materials used for the inlet and the conduit shall be suitable for the purpose intended, see Conservation Practice Standard (620) Underground Outlet. Terrace ridges constructed across gullies or depressions shall be compacted by machinery travel or by other suitable means to insure proper functioning of the terrace.

Additional Details: _____

NATURAL RESOURCES CONSERVATION SERVICE
MISSOURI CONSTRUCTION SPECIFICATION

FOR

TERRACE
STEEP BACKSLOPE
(feet)
CODE 600

General

Construction operations shall be carried out in a manner and sequence that erosion and air and water pollution are minimized and held within legal limits.

The completed job shall present a workmanlike appearance and shall conform to the line, grades, and elevations shown on the drawings or as staked in the field. Contractor shall be assured that all state laws concerning buried utilities are met.

All operations shall be carried out in a safe and skillful manner. Safety and health regulations shall be observed and appropriate safety measures used.

Site preparation

All dead furrows, ditches, or gullies shall be filled before constructing the terrace or shall be part of the construction. All old terraces and other obstructions shall be removed, as necessary, to install a farmable system.

Terrace construction

The terrace shall be constructed according to the planned alignment, grade, and cross section with the specified overfill for settlement and the channel to drain reasonably well. The constructed slope of the vegetated backslope must be 2 (horizontal - H) :1 (vertical - V) or flatter. Cut slopes must be 5 (H) :1 (V) or flatter.

The minimum moisture content for obtaining the required compaction shall be such that when the material is kneaded in the hand, it will form a ball which does not readily separate. Fill material that is too dry shall have water added or work shall be stopped until moisture conditions are satisfactory.

Earthfill shall be placed in 9 inch layers. Each layer will be compacted by complete coverage by at least two passes with the hauling and spreading equipment or equivalent. Care must be taken to assure proper compaction and bond of the fill material to the existing fill. The side slopes of the existing fill shall be excavated until moist material is uncovered and a good bond can be attained.

Any ditch or depression at the bottom of the backslope shall be filled and smoothed so that drainage will be away from the terrace and not parallel to it. Terrace ridges constructed across gullies or depressions shall be compacted to insure proper functioning of the terrace.

Any channel blocks shall have a minimum top width of 6 feet and side slopes 5:1 or flatter unless shown otherwise on the drawings.

Cuts and fills should be made in such a manner that topography will be enhanced. Excavation for steep backslope terraces should be made from the downhill side except where cuts and fills are required to improve alignment. Excessive cuts should not be made in depressions to secure borrow to build the terrace ridge. Borrow for large fills across depressions shall be taken from the intervening ridges, preferably immediately below the terrace ridge, which will tend to flatten the area to be farmed.

The surface of the finished terrace shall be reasonably smooth and present a workmanlike finish.

The vegetated portions of steep backslope terraces shall be uniform and be left in a condition which will allow adequate seedbed preparation.

If required on the drawings, topsoil shall be salvaged from the footprint area of both the channel and terrace ridge, stockpiled and spread over excavations and other areas to facilitate restoration of productivity.

If vegetation is required, seedbed preparation, fertilizing, seeding, and mulching shall comply with specifications in technical guides

When underground conduits are used as an outlet to a terrace, they shall be constructed according to Missouri Construction Specification for Underground Outlet (620) or as shown on the drawings.

Provisions must be made to prevent piping if underground circuits are located under terrace ridges. Mechanical compaction, water packing, trench sidewall sloping, and installation and backfill of conduit trenches early enough to allow adequate settlement are methods that can be used. The materials used for the inlet and the conduit shall be suitable for the purpose intended, see Conservation Practice Standard (620) Underground Outlet. Terrace ridges constructed across gullies or depressions shall be compacted by machinery travel or by other suitable means to insure proper functioning of the terrace.

Vegetation

Steep backslope terraces shall have the entire backslope seeded.

Topsoil shall be added, if needed, to establish vegetation. Refer to JS-AGRON-25 or seeding and mulching recommendations or equivalent.

Additional Details: _____

NATURAL RESOURCES CONSERVATION SERVICE
MISSOURI CONSTRUCTION SPECIFICATION

FOR

TERRACE
NARROW BASE
(feet)
CODE 600

General

Construction operations shall be carried out in a manner and sequence that erosion and air and water pollution are minimized and held within legal limits.

The completed job shall present a workmanlike appearance and shall conform to the line, grades, and elevations shown on the drawings or as staked in the field.

All operations shall be carried out in a safe and skillful manner. Safety and health regulations shall be observed and appropriate safety measures used. Contractor shall be assured that all state laws concerning buried utilities are met.

Site preparation

All dead furrows, ditches, or gullies shall be filled before constructing the terrace or shall be part of the construction. All old terraces and other obstructions shall be removed, as necessary, to install a farmable system.

Terrace construction

The terrace shall be constructed according to the planned alignment, grade, and cross section with the specified overfill for settlement and the channel to drain reasonably well. The constructed side slopes must be 2 (horizontal -H) :1 (vertical - V) or flatter. Cut slopes must be 5 (H) :1 (V) or flatter.

The minimum moisture content for obtaining the required compaction shall be such that when the material is kneaded in the hand, it will form a ball which does not readily separate. Fill material that is too dry shall have water added or work shall be stopped until moisture conditions are satisfactory.

Earthfill shall be placed in 9 inch layers. Each layer will be compacted by complete coverage by at least two passes with the hauling and spreading equipment or equivalent. Care must be taken to assure proper compaction and bond of the fill material to the existing fill. The side slopes of the existing fill shall be excavated until moist material is uncovered and a good bond can be attained.

Any ditch or depression at the bottom of the backslope shall be filled and smoothed so that drainage will be away from the terrace and not parallel to it. Terrace ridges constructed across gullies or depressions shall be compacted to insure proper functioning of the terrace.

Any channel blocks shall have a minimum top width of 6 feet and side slopes 5 (H) : 1 (V) or flatter unless shown otherwise on the drawings.

Cuts and fills should be made in such a manner that topography will be enhanced. Excavation for narrow base terraces should be made from the downhill side except where cuts and fills are required to improve alignment. Excessive cuts should not be made in depressions to secure borrow to build the terrace ridge. Borrow for large fills across depressions shall be taken from the intervening ridges, preferably immediately below the terrace ridge, which will tend to flatten the area to be farmed.

The vegetated portions of narrow base terraces shall be uniform and be left in a condition which will allow adequate seedbed preparation. The surface of the finished terrace shall be reasonably smooth and present a workmanlike finish.

If required on the drawings, topsoil shall be salvaged from the footprint area of both the channel and terrace ridge, stockpiled and spread

over excavations and other areas to facilitate restoration of productivity.

If vegetation is required, seedbed preparation, fertilizing, seeding, and mulching shall comply with specifications in technical guides

When underground conduits are used as an outlet to a terrace, they shall be constructed according to Missouri Construction Specification for Underground Outlet (620) or as shown on the drawings.

Provisions must be made to prevent piping if underground circuits are located under terrace ridges. Mechanical compaction, water packing, trench sidewall sloping, and installation and backfill of conduit trenches early enough to allow adequate settlement are methods that can be used. The materials used for the inlet and the conduit shall be suitable for the purpose intended, see Conservation Practice Standard (620) Underground Outlet. Terrace ridges constructed across gullies or depressions shall be compacted by machinery travel or by other suitable means to insure proper functioning of the terrace.

Vegetation

Narrow base terraces shall have both the backslope and the front slope seeded.

Topsoil shall be added, if needed, to establish vegetation. Refer to JS-AGRON-25 or seeding and mulching recommendations or equivalent.

Additional Details: _____

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**(Blue/light font indicates changes from previous standard.)*